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ning of each regular issue of the PCT Gazette.*

(54) Title: **RAPID ONE-STEP METHOD FOR GENERATION OF ANTIGEN LOADED DENDRITIC CELL VACCINE FROM PRECURSORS**

(57) Abstract: A one-step method for producing antigen loaded antigen-presenting cells from monocytes ex vivo has been found which comprises contacting the monocytes with a composition comprising an activator such as TNF alpha preferably in combination with at least one growth factor such as GM-CSF and at least one soluble or particulate antigen. According to the methods of the present invention, antigen-loaded dendritic cell vaccines can be generated within as little as three (3) days. In another method of the present invention, antigen loaded antigen-presenting cells are produced from monocytes ex vivo by contacting the monocytes with TNF alpha and granulocyte-macrophage colony stimulating factor at one time point to form antigen-presenting cells and then contacting antigenpresenting cells with soluble or particulate antigenic material at a second time point to form antigen loaded antigen-presenting cells, wherein the antigen loaded antigen-presenting cells are produced in less than four days. The present invention also includes a vaccine which comprises monocyte-derived antigen loaded antigen-presenting cells, wherein the antigenpresenting cells are composed of two or more subsets selected from the group consisting of Langerhans cells with surface markers (CD 1 a+ CD207+); interstitial dendritic cells with surface markers (CD 1a+ CD207-); double negative dendritic cells with surface markers 20 (CD 1 a-CD 14-); and dendritic cells with surface markers (CD 14+ CD 1 a- CD209+).

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

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US CL : 424/93.71, 278.1; 435/325, 377

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 424/93.71, 278.1; 435/325, 377

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
WEST, Medline, Caplus, Embase, Biosis, Prompt**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	PALUCKA, A.K., et al. Blood dendritic cells: Multi-potential differentiation or committed subsets? Blood. 15 November 1999, Vol. 94, No. 10, Suppl. 1, Part 1, page 48A, see entire document.	1-43
Y	GLUCKMAN, J.C., et al. In vitro generation of human dendritic cells and cell therapy. Cytokines, Cellular and Molecular Therapy. 1997, Vol. 3, pages 187-196, see entire document.	1-43
Y	CHOI, G.S., et al. Analysis of Methods for the Generation of Dendritic Cells from Human Peripheral Blood Monocytes. Yonsei Med. J. 2000, Vol. 41, No. 5, pages 642-650, see entire document.	1-43
Y	FEUERSTEIN, B., et al. A method for the production of cryopreserved aliquots of antigen-preloaded, mature dendritic cells ready for clinical use. J. Immunol. Methods. 2000, Vol. 245, pages 15-29, see entire document.	1-43

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

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